

Coal Gasification for Electric Power Generation - Process Conditions Effecting Contaminant, D. H. Archer, J. L. P. Chen, E. F. Sverdrup, R. W. Hornbeck, Westinghouse Research Labs, Beulah Road - Churchill Boro, Pittsburgh, Pa. 15235.

A coal gasification process has been proposed to provide fuel for electric power generation in a gas and steam turbine combined cycle power plant. The process uses multistaged fluid beds with countercurrent gas and solids flow to produce a low cost plant capable of economically gasifying a wide range of coals. The plant is being designed to meet stringent air pollution standards. It employs a high temperature dolomite sorbent bed for desulfurization. Both coal and dolomite particles are followed through the gasification process to establish the gas compositions, residence times, and temperatures that will effect the release of contaminants. Using these process conditions, a companion paper estimates the release of the alkali metal compounds which are potentially harmful to the turbine.